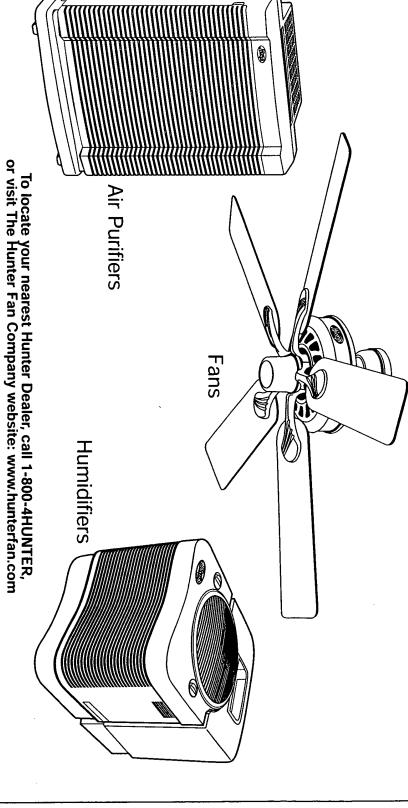
SINCE 1886

# **AUTO SAVER 550**

Owner's Manual

**Model 44550** 

# Other Quality Products from Hunter **Ask Your Local Retailer for**



### Introduction

## **CONGRATULATIONS!**

Your new Hunter electronic thermostat will provide years of reliable service. By saving energy, your thermostat will pay for itself during its first season of use. Thank you for buying a Hunter product!

Please read this manual for complete instructions on installing and operating your thermostat.

If you require further assistance, call Hunter Technical Support at 901-745-9222 from 8 a.m. to 5 p.m. Central Time.

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Serial Number _	Model Number
	44550

Date Purchased\_\_\_\_\_

Where Purchased\_\_\_\_\_

|--|

OPERATIONS (continued)	Temporary Manual Override	
	Permanent Manual (Vacation) Override	
	Auto Season Changeover	
	Home Today	
	Energy Monitor	
	Filter Monitor	
	Auto Recovery	
	Keyboard Lock	
	Backlighting	
SAFETY FEATURES	Low Battery Warning	
	Error Mode	
	Auto Cut-Off	
TROUBLESHOOTING	Problems & Solutions	
	Technical Support	
WIRING DIAGRAMS	Heat / Cool Systems	36
	Single-Stage Heat Pump Systems	
	Heat Only / Cool Only Systems	

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# Read This Before Installing Thermostat

### **IMPORTANT**

Read the entire installation section of this Owner's Manual thoroughly before you begin to install or operate your Hunter Thermostat.

REMOVE THE MYLAR LABEL FROM THE LCD DISPLAY WINDOW.

### INSTALLATION

2 All installation is normally performed at your thermostat.

## ARMCHAIR PROGRAMMING

Jinserting the batteries and following the instructions starting on page 16. This can be done while you relax in your favorite chair and is a very good way to familiarize yourself with all the functions of your Hunter Thermostat.

Note: At initial power-up this thermostat is programmed at 68°F (20°C) for Heat and 78°F (26°C) for Cool. Any change to the set temperature will be treated as a Permanent Manual Override. See page 25 for more information. Press Auto Program to load the built-in energy saving programs.

### **OPERATION**

4 Your Thermostat is designed to operate with most gas, oil, electric or 2-wire hot water heating and air conditioning systems. It will also operate single-stage heat pumps that do not have auxiliary or emergency heat. These have 24-volt or millivolt control systems and

represent most central heating, air conditioning, or space heating units in use in the United States.

This Hunter Thermostat will NOT control multi-stage heat pumps or 110/220 Volt systems.

## COMPRESSOR PROTECTION

5 The thermostat provides a 3.5 minute delay after shutting off the heating or cooling system before it can be restarted. This feature will prevent damage to your compressor caused by rapid cycling. Note that this delay also applies to the heating system control. It does not provide a delay when there are power outages.

## TEMPERATURE RANGE

Your thermostat can be programmed between 40°F and 95°F (4°C and 35°C). However, it will display room temperatures from 32°F to 99°F (0°C and 37°C). "HI" will be displayed if the temperature is higher than 99°F (37°C), and "LO" will be displayed if the temperature is lower than 32°F (0°C).

NOTE: The thermostat will automatically change to the Cool mode if the thermostat measures a temperature over 99°F (37°C). "Hi" will be displayed on the LCD, and the Cooling system will turn On. Similarly, the thermostat will automatically change to the Heat mode if the temperature is below 32°F (0°C). "LO" will be displayed on the LCD, and the Heating system will turn On.

# Read This Before Installing Thermostat (continued)

### **POWER FAILURE**

Whenever the main power is interrupted or fails, the battery power retains the programs and current time

### **AUTO RECOVERY**

Your thermostat is set from the factory to gradually recover the room temperature from an energy saving program to your comfort program. Therefore, the thermostat may turn your system on several minutes prior to your programmed time. This operation is normal, but can be turned off. Refer to the Selector Switches information on pages 14-15.

## **BATTERY WARNING**

Fresh alkaline batteries should provide over one year of service. However, when the batteries become drained, "BATT" will alternate on the display with the current time. When this message occurs, install 2 new AA batteries. You

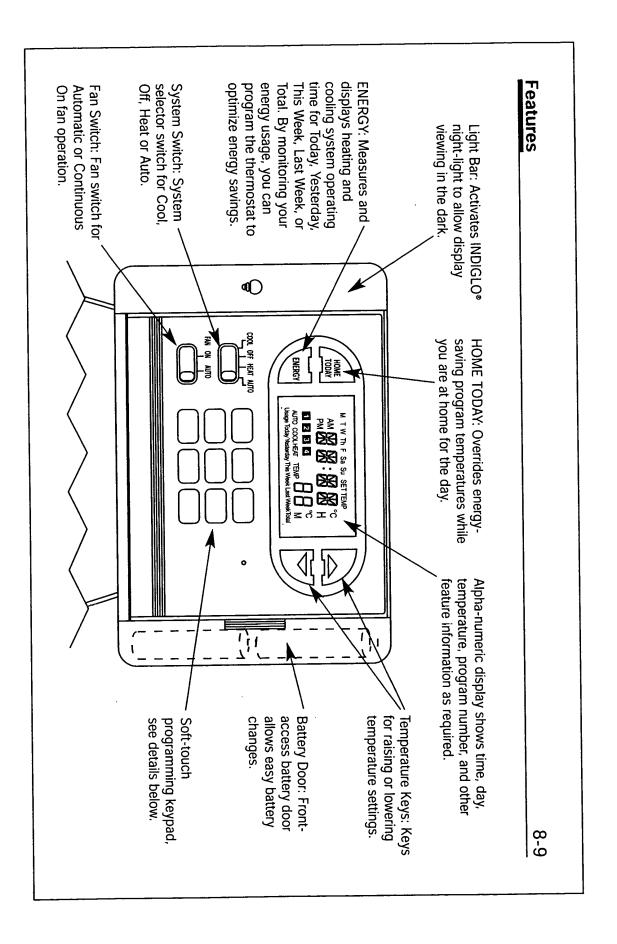
have approximately 1 minute to change the batteries and keep thermostat's clock and program settings. Once the batteries have become too low to ensure proper operation, your system will be turned Off, and the display will be cleared except for "BATT" flashing on the LCD display.

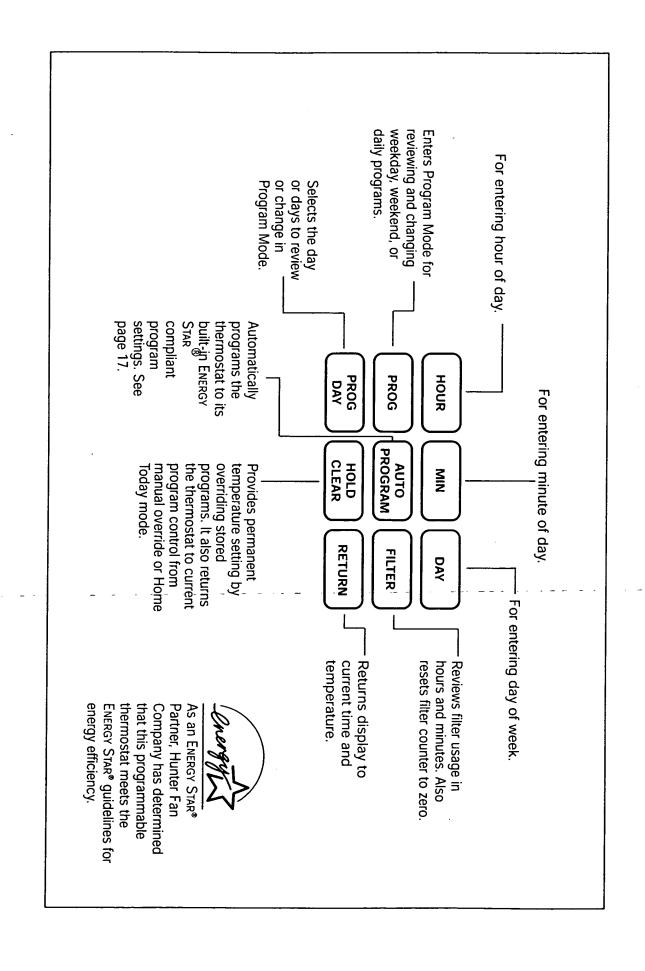


CAUTION: Once the "BATT" only display occurs, the thermostat is shut down, and your system will no longer operate. In this condition, there is no temperature control of your dwelling.

NOTE: The INDIGLO® night-light will not function when the thermostat is in low battery condition.

NOTE: If you plan to be away from the premises over 30 days, we recommend that you replace the old batteries with new alkaline batteries prior to leaving.





## What You Need

anchors for mounting. To install your thermostat, you should have the following tools and materials. This thermostat includes two #8 slotted screws and two wall

- Slotted Screwdriver(s)
- Phillips Screwdriver
- Hammer
- Electric drill and 3/16" bit
- Two 1.5 V (AA) size alkaline batteries

## Remove Old Thermostat

WIRES MUST BE LABELED PRIOR TO REMOVAL. thermostat before reading the instructions carefully. CAUTION: Do not remove any wiring from existing

- power panel or at the furnace. ■ IMPORTANT! Turn off the power to the furnace at the main
- thermostats will have screws or other locking devices that must first be removed. Once wall mounting plate is exposed, ook for wires. Remove existing thermostat cover. See Figure 1. Some

have doors that open to expose wires and mounting screws. the wallplate. Again, look for screws, tabs, etc. Some models (See Figure 1). If wires are not visible, they may be connected to the back of

### TYPICAL HOME THERMOSTATS Figure 1

Wall Mounting Plate

Thermostat

Cover



Wall Mounting Plate



Thermostat



### Wire Labeling

- Each wire coming from the wall to the existing thermostat is connected to a terminal point on that thermostat. Each of these terminal points is usually marked with a code letter as shown in Table A on this page.
- The number of wires in your system can be as few as two (for be concerned about how many wires there are. heat only systems), as many as eight, or any number in between you follow the labeling procedures correctly, you do not have to
- There is often no terminal marking on the existing thermostat of two wire, heat only systems. Just connect either of the wires to the RH terminal, then connect the other wire to the W terminal to complete the circuit.
- IMPORTANT! BEFORE DISCONNECTING ANY WIRES, APPLY label marked W to the wire which goes to the W or H terminal on SHOWN IN TABLE A ON THIS PAGE. (For example, attach the your existing thermostat.) IGNORE THE THE SELF-ADHESIVE LABELS PROVIDED TO THE WIRE AS

not always comply with the standard. COLOR OF THE WIRES since these do

After labeling wires, disconnect them from

Remove existing wallplate. To make sure you may want to tape them to the wall. wires do not fall back into wall opening, the existing thermostat terminals

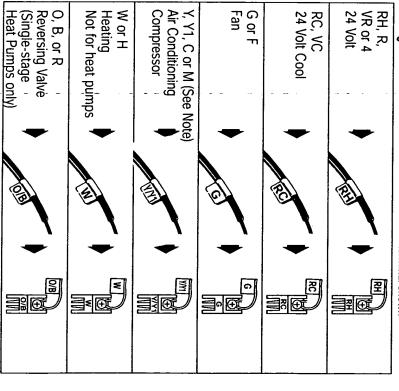
If hole in wall is larger than necessary for wires, seal this hole so the wall. This air could cause a false thermostat reading. that no hot or cold air can enter the back of the thermostat from

> existing thermostat is with label shown terminal shown

If the code letter on your

then mark the wire

and connect to thermostat



lable A

do not use. This wire provides electricity to non-battery powered thermostats. NOTE: Do not connect a "Common" wire (sometimes labeled "C") to any terminal on this thermostat. Tape up the wire and

# Mount Wallplate and Thermostat

- Remove the wallplate from your thermostat by pressing the release tab on the bottom of the thermostat. (See Figure 2.)
- Position wallplate on wall and pull existing wires through large opening. Then level for appearance. Mark holes for plastic those on the Hunter wallplate. anchors provided if your existing holes do not line up with

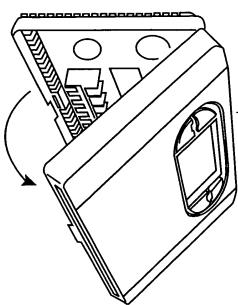
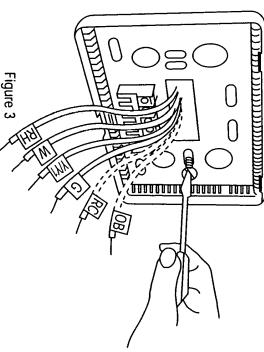


Figure 2

- Drill holes with 3/16" bit and gently tap anchors into the holes until flush with wall.
- Reposition wallplate to wall, pulling wires through large and tighten. (See Figure 3.) opening. Insert mounting screws provided into wall anchor



## NOTE: 5-wire Systems

the wallplate. If your thermostat has one wire marked R or RH (4-wire system), then leave the jumper wire between the RH and RC terminals on

Otherwise, if you have separate RH and RC wires (5-wire system), then remove the jumper wire between the RH and RC terminals

# **Connect Wires and Mount Thermostat Cover to Wall Plate**

- Match and connect the labeled wires to the appropriate coded terminal screws on the mounting plate. (See Figure 4, 5.) Ignore any wires which may be present, but which were not connected to the old thermostat.
- Be sure to tighten the terminal screws securely, otherwise a loose wire could cause operational problems with your system or thermostat.
- Push excess wire back into hole to prevent interference with mounting of the thermostat cover.
- Make sure the System Switch is set to OFF, and the FAN-AUTO Switch is in AUTO.
- If your system has an O or B wire, you must move the Heat Pump selector switch to the appropriate position. Refer to the next page for more information.
- slot at the bottom of the wallplate. Press top of the thermostat body to snap it into the wallplate. **NOTE:**Do not force the thermostat onto the wallplate, as the terminal pins may be damaged. If it does not snap properly, the thermostat may not work.

I Insert the bottom tab on the thermostat body into the

- Insert the two AA size alkaline batteries, observing the polarity marked on the unit.
- Switch on the main power at the panel or furnace.

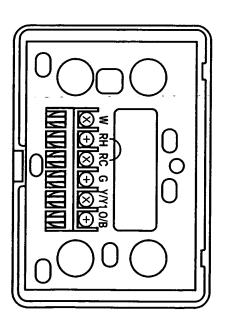


FIGURE 5

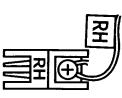


FIGURE 4



## Selector Switches

In order for this Hunter thermostat to control your system, the system type must be specified by selector switches on the printed circuit board inside the thermostat. There are also other selector switches that allow you to customize the features to suit your needs.

NOTE: When changing these features after installation, move the HEAT / COOL selector switch to OFF before removing the thermostat from the wall.

## System Selector Switches:

# ■ Heating system selector (HG – HE switch)

The factory position for this switch is in the "HG" position. Leave it in this position if you have a gas furnace or an oil burner. If you have an electric furnace, test to see whether the Heat and Fan come on as expected.

and Fan come on as expected.

If Fan operation is normal, leave the switch in the "HG" position If the Fan does not come on within a minute of the thermostat calling for Heat, change the switch position to "HE."

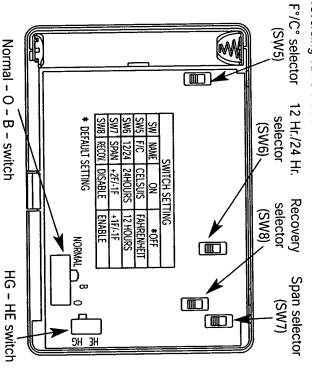
The system selector has no effect in the cooling mode.

NOTE: "HG" position is for gas and most other systems. "HE" position is for certain electric systems having a fan relay.

# ■ Furnace or Heat Pump selector (NORMAL - 0 - B switch)

The factory position for this switch is in the NORMAL position. Leave it in this position if you have ANY system that uses gas, oil, electric, or hot water heating.

If you have a single-stage Heat Pump (no auxiliary or emergency heat source), then slide the switch to the position that matches your Reversing Valve type. If your heat pump system has a "B" wire, slide the switch to "B" for your reversing valve that activates in HEAT mode. If your heat pump system has an "O" wire, slide the switch to "O" for your reversing valve that activates in COOL mode.



## Feature Selector Switches:

# ■ F° / C° selector (Fahrenheit / Centigrade) - Switch 5

Your thermostat is set for F° mode from the factory. In order to change to C° mode, slide the switch to C° and press the reset button on front of the thermostat with a paper clip.

NOTE: Unless the reset button is pressed, the thermostat will not change temperature mode.

# ■ 12 Hr. / 24 Hr. selector – Switch 6

Your thermostat is set for normal 12 hour (AM / PM) time format. To change to 24 hour (military) time, slide the switch to the 24 position. This change may be made without resetting the thermostat, and will automatically change the current time display and all program times in memory.

## ■ Span selector - Switch 7

Your thermostat is set to cycle at 1° F (0.5°C) above and below the set temperature. If you require slower temperature cycles in

Heat mode, you can select +2°F / – 1°F by sliding the switch to the ALT position. This may be necessary if your heating system cycles too rapidly.

# ■ Auto Recovery selector - Switch 8

Your thermostat is set from the factory with the Auto Recovery Feature enabled, which complies with the EPA ENERGY STAR® Program. If you prefer to use normal recovery, slide the switch to the ALT position.

Refer to page 30 for a complete discussion of the Auto Recovery feature.

## Feature Selector Summary:

Table B below summarizes the Feature Switches discussed above. A similar table is printed directly on the circuit board for your quick reference.

Enable	Disable	Auto Recovery	8 WS	
+1°F / -1°F	+2°F / -1°F	Span	SW 7	
12 Hour	24 Hour	12 Hr. / 24 Hr.	SW 6	
Fahrenheit	Celsius	F°/C°	SW 5	
Standard	Alternate	Function	Switch	
Switch Setting	Switch			

Table B

## **Setting Time and Day**

Remove the mylar label covering the LCD display window before operating thermostat

■ Initial display after power-up or reset. The LCD will show the information when batteries are first installed, or after the Reset button is pressed. The temperature will update after a few seconds.

AΜ TEMP 72

During time and day setting mode, the temperature and program displays will go blank.

×

Eh:5

Set the **EXAMPLE:** 

HOUR

lacksquare Press and hold to rapid advance to the current hour. Tap to advance one hour at a time. Note the AM / PM indicator, as the display will cycle

thermostat

through 24 hours.

 $\blacksquare$  Press and hold to rapid advance to the current minute. Tap to advance one minute at a time.

of 9:43 a.m.

to the

current time

Σ

■ Tap to advance one day at a time

Saturday. Refer to

DAY

Figure at

RETURN

lacksquare When finished, press to return to the Normal time and temperature display or wait 15 seconds for it to return to Normal mode automatically.

> Ř 67:63 8

TEMP

## **Auto Programming**

Studies conducted by the Department of Energy estimate that setting your thermostat back 10°F (6°C) for two 8-hour periods during winter can reduce your fuel bill by as much as 33%. By setting your thermostat up 5°F (3°C) for two 8-hour periods during summer you can reduce your fuel bill up to 25%.

Your thermostat is capable of holding up to 4 separate programs for each day of the week. You can program all weekdays, Monday

to Friday, to the same 4 programs as shown in the table, or each weekday can have a different set of 4 programs. Similarly weekend programs, Saturday and Sunday, can be the same 4 programs or each weekend day can have a different set of 4 programs.

Your Hunter thermostat is pre-programmed to meet the ENERGY STAR® guidelines for energy efficiency. Note that it is easier to modify these programs than to program the thermostat manually.

AUTO PROGRAM

■ Press once. During Auto Programming, the display will change as shown.

AM AU Th F Sa Su

AM AU TH F Sa Su

PM AU TH F Sa Su

COOL HEAT

■ The thermostat will be programmed for all 7 days of the week as shown below.

		Temperatu	Temperature in F° (C°)
Program Number	Time	Heat	Cool
1	6:00am	68°F (20°C)	78°F (26°C)
2	8:00am	60°F (16°C)	85°F (29°C)
ω	4:00pm	68°F (20°C)	78°F (26°C)
4	10:00pm	60°F (16°C)	82°F (28°C)

■ Refer to Manual Programming on page 19 for instructions on entering or changing the programs.

## **PROGRAMMING**

18-19

# Personal Program Schedule

Before programming or changing programs, use this Personal Use a pencil so you can revise you Program Schedule to determine which times and temperature settings change your temperature settings. will best satisfy both your comfort and energy saving requirements.

Use a pencil so you can revise your records each time you

### Heating

•				
Day	Program 1	Program 2	Program 3	Program 4
Mon.	Time	Time	Time	Time
	Temp	Temp	Temp	Temp
Tues.	Time	Time	Time	Time
	Temp	Temp	Temp	Temp
Wed.	Time	Time	Time	Time
	Temp	Temp	Temp	Temp
Thurs.	Time	Time	Time	Time
	Temp	Temp	Temp	Temp
Fri.	Time	Time	Time	Time
	Temp	Temp	Temp	Temp
Sat.	Time	Time	Time	Time
	Temp	Temp	Temp	Temp
Sun.	Time	Time	Time	Time
	Temp	Temp	Temp	Temp

### Cooling

Program 1 Time	Program 2 Time	Program 3	Program 4
Time	Time	+:	
		lime	Time
Temp	Temp	Temp	Temp
Time	Time	Time	Time
Temp	Temp	Temp	Temp
Time	Time	Time	Time
Temp	Temp	Temp	Temp
Time	Time	Time	Time
Temp	Temp	Temp	Temp
Time	Time	Time	Time
Temp	Temp	Temp	Temp
Time	Time	Time	Time
Temp	Temp	Temp	Temp
Time	Time	Time	Time
Temp	Temp	Temp	Temp

## Manual Programming

- Your thermostat can be programmed for weekdays and weekends, or have unique programs for all 7 days. Use Weekday/Weekend Programming below or 7-day Programming on page 21 to enter or revise programs to match your Personal Program Schedule. The same steps are used when entering programs for the first time, or revising programs entered during Auto Programming.
- When batteries are first installed, the thermostat has all 4 programs set for 68°F (20°C) in Heat mode and 78°F (26°C) in Cool mode.

NOTE: There are no energy saving time or temperature settings until the thermostat is Auto Programmed or Manually Programmed.

■ Familiarize yourself with Manual Programming, so that you can easily modify your programs as your comfort needs change. The example below demonstrates the Manual Programming method.

- NOTE: 1) The program time can be set in 10 minute increments, and remains the same for both Heat and Cool programs.
- The program temperature can be set in increments of 1°F (1°C).
- The Heat setpoint can not be set higher than the Cool setpoint, and the Cool setpoint can not be set lower than the Heat setpoint.
- 4) If the system selector is in AUTO mode, the current operating mode will be used for programming.
- After 15 seconds without a key press, the thermostat will return to normal display mode.
- 6) When setting the program time, note the AM / PM indicator
- 7) With the Auto Recovery feature enabled, you do not need to set your comfort program times early. Auto Recovery will determine how early to turn your system on, so that the room is comfortable at the program time.

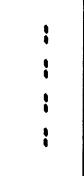
# Weekday/Weekend Programming

Step 1 COOL OFF HEAT AUTO

Slide System Selectories

■ Slide System Selector Switch to HEAT or COOL to program the corresponding system.

NOTE: If the system selector is in the OFF position, no programming is permitted The LCD display will show only dashes when the program key is pressed.



# Weekday/Weekend Programming (cont.)

Step 2 PROG Press PROG key to enter program mode, display shows weekday programs.

■ Display for HEAT mode shown.

and

Step 3

Use

HOUR

to change the setpoint temperature.

₹ Z

to change the setpoint time

Use and

■ Press to move to programs 2, 3 and 4.

Step 4

PROG

■ Repeat Step 3 to complete the weekday programs.

PROG DAY

Step 5

Press to change to weekend programs.

Repeat Steps 3 and 4 to complete the weekend programs.

If you desire only weekend and weekday programs, press to return to

normal mode.

Step 6

RETURN

lacksquare After 15 seconds, the thermostat will return to normal mode automatically.

Step 7

COOL OFF HEAT AUTO

■ Change the System Selector Switch to the other system, and repeat Steps 2 through 6 above.

HEAT 89

MTWThF

Step 2

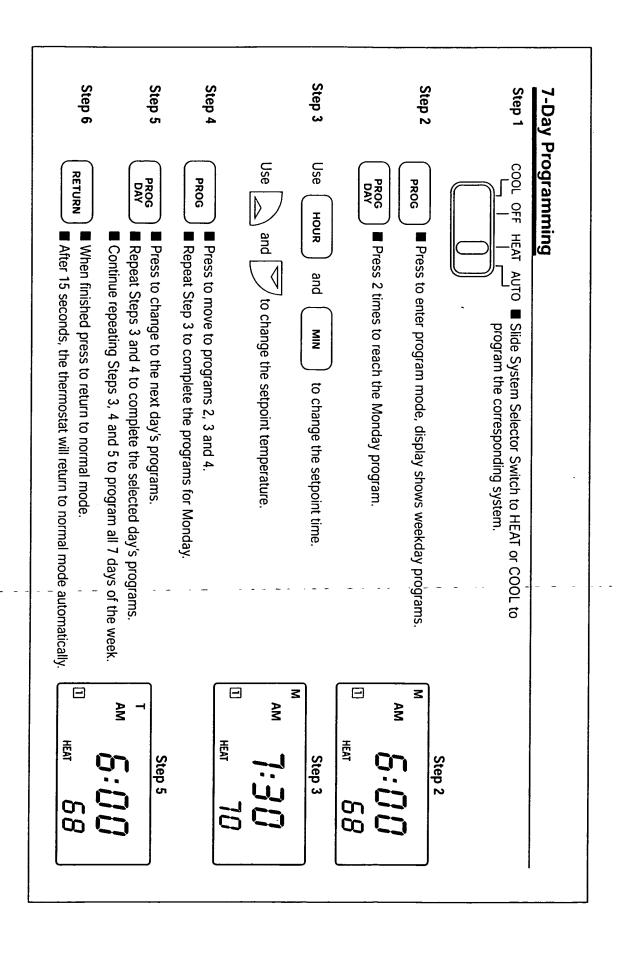
Step 3

MTWThF Α HEAT

Step 5

A

HEAT

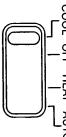




22-23

# 7-Day Programming (cont.)

Step 7



COOL OFF HEAT AUTO ■ Change the System Selector Switch to the other system, and repeat Steps 2 through 6 above.

## **Reviewing Programs**

Weekday Programs You may want to review the programs to confirm that the settings are compatible with your lifestyle. PROG ■ Press to display M – F programs.

MTWThF

■ Press repeatedly to cycle through the 4 programs.

Weekend Programs PROG DAY ■ Press to display the Sa – Su programs

Press repeatedly to cycle through the 4 programs.

PROG

Ξ AM

PM ω Æ

Daily **Programs** PROG PROG DAY ■ Press to change to Sa – Su. Again, if the display is blank, one of the weekend programs is different. NOTE: Time and Temperature display will be blank when at least one weekday program is different. ■ Press to display M – F programs MTWThF

Press again to change to Monday's program.

Continue pressing to cycle through each day.

Press repeatedly to cycle through the 4 programs.

PROG

Press to return to normal mode.

RETURN ■ After 15 seconds, the thermostat will return to normal mode automatically.

NOTE: Programs take affect as soon as the thermostat returns to normal mode.

If you are armchair programming the thermostat, slide the system selector to the OFF position before mounting the thermostat to the wallplate.

# Reviewing the Current Temperature Setting

- Current time and temperature.
- Thermostat is set to AUTO, and the heating system is on.

1 익

I Press for 1 second or less

Refer to the next page.

I Set Temperature is shown above current room temperature. AUTO ω HEAT TEMP 50

If held for over 1 second, Temporary Manual Override mode is entered ω HEAT TEMP 58 SET TEMP

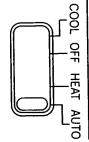
## OPERATION

# うと

24-25

## System Selector Switch

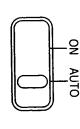
recommend using the AUTO mode. Refer to the Auto Season Changeover information on page 26. You may select COOL, OFF, HEAT, AUTO. In order to take full advantage of this thermostat's features, we The System Selector switch on the front of the thermostat determines the operating mode of the thermostat.



the OFF position to prevent the possibility of a rapid system On-Off. NOTE: Anytime you install or remove the thermostat from the wallplate, slide the System Selector to

### Fan Switch

up delay. For electric heat, air conditioning, and heat pump operation, the Fan will turn on with the system. operation of your system. In a normal gas or oil furnace, the Fan will be turned on by your furnace after its warm-To run the Fan continuously, slide the Fan switch to the ON position. The Fan switch should normally be set in the AUTO position. The Fan will be turned on along with normal

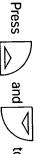


# Temporary Manual Override

To temporarily change the current set temperature without affecting your program:



for about 1 second to enter Manual Override mode Display will flash.



 $^{\prime}$  to change to your desired new temperature



RETURN

■ Press to return to normal mode, or wait 15 seconds for it to return automatically.

■ The current program number will flash to signify the Temporary Override.

At the next program change, the Temporary Override is canceled, and the next program temperature becomes the setpoint temperature.

To end the Temporary Manual Override

HOLD

Press and wait for HOLD to display on the LCD

 $\blacksquare$  Press again. This will return the set temperature to the current program set temperature.

NOTE: The Auto Season Changeover feature will not operate while the thermostat is in Temporary Manual

Override. Refer to the Auto Season Changeover feature on page 26 for more information.

NOTE: If the thermostat has not been programmed, then a Temporary Override becomes a Permanent Override. See the next section for more information.

# Permanent Manual (Vacation) Override

To hold your manual override for vacation or just an extended period of time:

HOLD

■ Press to make the current program's temperature the HOLD temperature. HOLD will alternate on the display with the normal time and temperature display.

■ Follow the Temporary Override Instructions above to change the Permanent Override temperature.

You can confirm the held set temperature by pressing either

for less than 1 second

To end the Permanent Manual Override:

■ Press again. The thermostat will return to the current program, and the flashing HOLD display will be canceled.

NOTE: The Auto Season Changeover feature will not operate while the thermostat is in Permanent Manual Override. Refer to the Auto Season Changeover feature on page 26 for more information.

**OPERATION** 

## Auto Season Changeover

appropriate temperature span has been reached. However, if apart to allow the Auto Season Changeover to occur when the depending on your program. We recommend keeping your changing unnecessarily. programmed heating and cooling temperatures at least 4°F (2°C) will automatically change between Heating and Cooling systems, your heating and cooling programs set temperatures are close When the System Selector is in AUTO position, the thermostat there is a built-in program to prevent the thermostat from

Auto Season Changeover is disabled when the thermostat is in Temporary or Permanent Override, as these overrides are energy

> Home Today mode, as this is a comfort setting. saving settings. Auto Season Changeover will still function in

For example, you may have the following temperatures

conditioner. will automatically change to cool mode and turn on the air If the room remperature rises above 78°F, then the thermostat

and turn on heat when the room temperature falls below 68°F. Likewise, the thermostat will automatically change to heat mode

### **Home Today**

you are normally away from home with one key press This Hunter patent pending feature allows you to quickly and temporarily override your energy saving program setting on days when Press to enter the Home Today override. The highest program temperature for today will be selected from your programs in Heat mode



I The display will alternate between "HOME" and the current time. the lowest program temperature for today to be the set temperature.)

and become the set temperature. (In Cool mode, Home Today will select

When pressed during the first or second program of the day, Home Today is pressed after the start of the third program time of the day, the thermostat will remain in Home Today will automatically return to program control at the start of the fourth program of the day. If Home Today mode until the first program of the next day.





If Home Today is already active, you may similarly extend it to the first of the third program. program of the next day by pressing the key again after the start time

If the system is changed between Heat and Cool modes (either updated. It will automatically change from the highest heat program override period, the setpoint temperature will be automatically program setpoint to the highest heat program setpoint. setpoint to the lowest cool program setpoint, or from the lowest cool manually or by Auto Season Changeover) during the "Home Today"



Press to exit Home Today mode before the schedule ending time. "HOME" is no longer displayed on the LCD screen, and the thermostat returns to the current program.

I You can manually change the setpoint temperature while in Home Today not affect the Home Today ending time. However, the set temperature will Manually changing the set temperature while in Home Today mode will not change automatically with a manual or Automatic change between mode. Refer to the Temporary Manual Override instructions on page 24. heating and cooling.



You may also press the Home Today key while in Temporary Manual Override. The operation is the same as the previous point above.

is not programmed by Auto or Manual programming. NOTE: The Home Today feature does not operate if the thermostat

## **Energy Monitor**

The Energy monitor feature measures and stores the amount of time the heating and air conditioning system operates. Usage can be displayed for Today (since 12am), Yesterday, This Week (since Monday), Last Week (last Monday through Sunday), and

Total (up to 999 Hrs. 59 Min.). By monitoring your energy usage, you see how much the set-back periods are saving and you can test program adjustment to save even more. Use table on page 18.



■ To review energy usage, press to cycle through Today, Yesterday, This Week, Last Week, and Total. Press again to return to normal mode, or wait 15 seconds for the display to return to normal mode. You can also return to normal mode at any time by pressing RETURN.

ENERGY

■ For example: This LCD display shows Today's usage to be 10 Hours, 26 minutes.

> 0 10 H Usage Today 26 M



■ Press and hold for 3 seconds to reset the Energy Monitor's counters.
The display will blink, and all counters will be cleared to zero.

and Total Energy usage are the same. Also, clearing the Filter Monitor counter will clear ALL Energy NOTE: Clearing the Energy Monitor counter will also clear the Filter Monitor counter, as Filter usage Monitor counters as well.

### Filter Monitor

efficiency, change or clean your filter regularly. Your thermostat also keeps a record of the number of hours your filter has been in use. To maximize your system's performance and energy

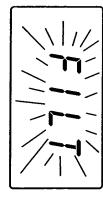
FILTER

When the total system run time for heat and cool reaches, 500 hours, "FILT" will alternate with the current time on the LCD display to remind you to clean or change your system's filter. "FILT" will continue to flash until the counter is set back to zero.

- Press to review total filter usage. The display will blink "FILT," then show the Filter Monitor counter. After 15 seconds, the display will return to normal mode, or you can hit RETURN to exit immediately. The Filter Monitor will display up to 999 hours and 59 minutes of usage.
- In this example, the counter is at 410 Hours, 26 minutes.

  To reset the Filter Monitor counter, depress FILTER for 3 seconds.

  The display will blink, and the counter will be reset to zero.



¥ 70 H

NOTE: Clearing the Filter Monitor counter will also clear ALL Energy Monitor counters, as Filter usage and Total Energy usage are the same. Also, clearing the Energy Monitor counters will clear the Filter Monitor counter as well.

**OPERATION** 

### Auto Recovery

comfort setpoint temperature. recover gradually from an energy-saving setpoint temperature to a Hunter's Auto Recovery feature meets the Energy STAR® guidelines for energy efficiency by allowing the heating or cooling system to

of the comfort temperature program period. Auto Recovery works so that the room temperature is already comfortable by the start in both Heat and Cool modes. Auto Recovery calculates how early to turn your system back On

programs: For example, in Heat mode, you could have the following

Program #1 (Morning)

Set Temp = 60°F Program #4 (Overnight)

Set Temp = 68°F Time = 6am

temperature at 6am would be about 68°F instead of 60°F. Heat on approximately 30 minutes early. Therefore, the room the thermostat turning on at 6am, Auto Recovery would note Time = 10pm the temperature difference between 60°F and 68°F and turn the The room temperature fell to 60°F overnight. Rather than having

1 When the thermostat is in with time, and the program display will alternate "RECV" indicator will flash Auto Recovery mode, the

2

# Details of Auto Recovery Operation:

- Auto Recovery can be disabled by sliding the Recovery switch on the circuit board to the ALT position. Refer to page 15.
- Auto Recovery will not operate if Permanent hold, Temporary hold or Home Today is in operation.
- Auto Recovery can be canceled manually if HOLD/CLEAR is that if time or program is changed then the thermostat will again until the next program period starts (an exception is canceled manually then the recovery process will not start pressed during the recovery process. If a recovery process is check Auto Recovery conditions immediately).
- Auto Recovery will be canceled and change to Home recovery process. Today mode if HOME TODAY is pressed during the
- Auto Recovery will be canceled and change to Temporary recovery process. Manual Override mode if the setpoint is adjusted during the
- lacksquare If the system changes between heat and cool (automatically canceled and return to program control mode. criteria are still met. Otherwise, the recovery process will be opposite system's comfort temperature if the recovery entry Recovery again. Setpoint temperature will be changed to the or manually) then the thermostat will recalculate Auto

## **Keyboard Lock**

The Keyboard can be locked to prevent unauthorized changes to the thermostat.

■ To lock or unlock the keyboard, press and hold BOTH the and and representation and representations are also and representations. The keyboard is locked

when LOCK appears on the display.

](D

■ All keys are locked, except for the LIGHT bar. Any time a key is pressed, LOCK will appear on the display for 1 second.

# Backlighting (INDIGLO® night-light)

Your thermostat has an electroluminescent lamp that backlights the display for easy viewing in the dark. Press the Light Bar on the left side of the thermostat to illuminate the display.



The display will remain illuminated for 5 seconds after the last key is pressed.

This allows the light to stay on if you need to operate several keys.

Note: If the thermostat is in Low Battery warning condition, the backlight will not operate. Replace with 2 new AA alkaline batteries to restore the Backlight function.

## Low Battery Warning

Your thermostat has a two-stage low battery warning system. When the batteries are first detected to be weak, the first stage low battery warning is indicated by "BATT" flashing on the LCD

display alternatively with the clock. You then need to replace the batteries with 2 new AA alkaline batteries.



NOTE: The backlight will not operate in low battery condition. Replace with 2 new AA alkaline batteries to restore the

Backlight function.

When the batteries become too weak for normal operation, the alone on the displication thermostat enters the second stage low battery warning which shuts down the thermostat. In this condition, "BATT" flashes replaced.

alone on the display, and the thermostat will turn your system Off. Your system will remain shut-off until the batteries are replaced.



confirming new batteries have been inserted, the thermostat will return to normal operation. NOTE: The thermostat will still keep the current time and your programs in memory until new batteries are installed. After

### **Error Mode**

If the thermostat is unable to control your system due to an unexpected battery problem, the thermostat will enter Error Mode. In this condition, the thermostat flashes "ERR-" on the LCD display, and shuts off your system.

To correct this problem, replace the batteries with 2 new AA alkaline batteries, even if you have recently replaced them. Next,

use a paper clip to press the RESET button next to the keypad. You will need to reprogram your thermostat and confirm normal operation.

If Error Mode returns, please call Hunter Technical support at (901) 745-9222 for further information.



### **Auto Cut-Off**

Your thermostat will automatically cut-off in Heat mode if the room temperature rises above 95°F (35°C). It will cut-off in Cool mode if the room temperature drops below 40°F (4°C).

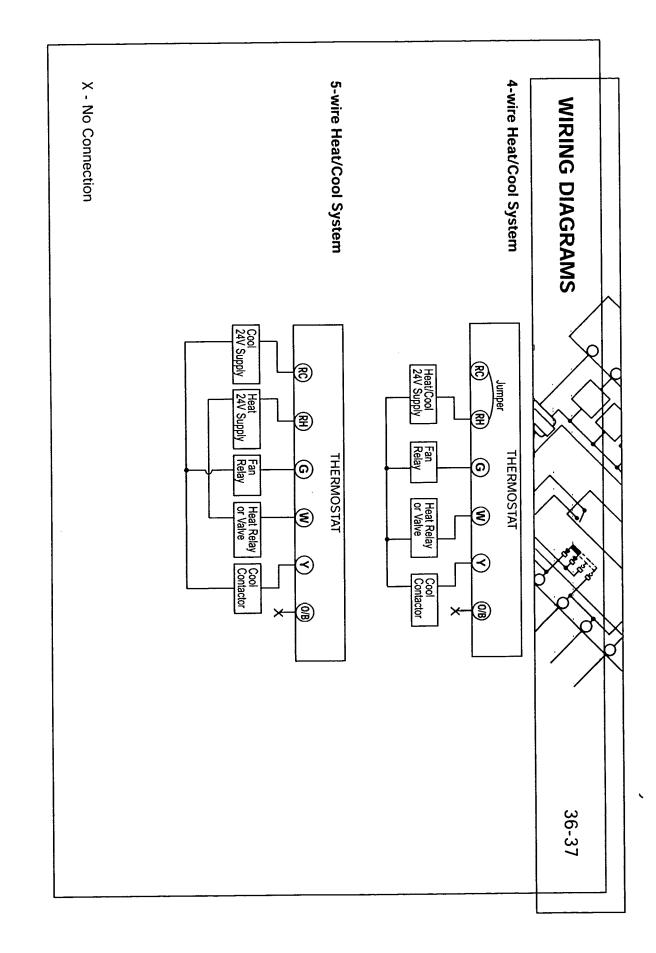
NOTE: If your system has malfunctioned and no longer responds to thermostat controls, the Auto Cut-Off will have no effect.

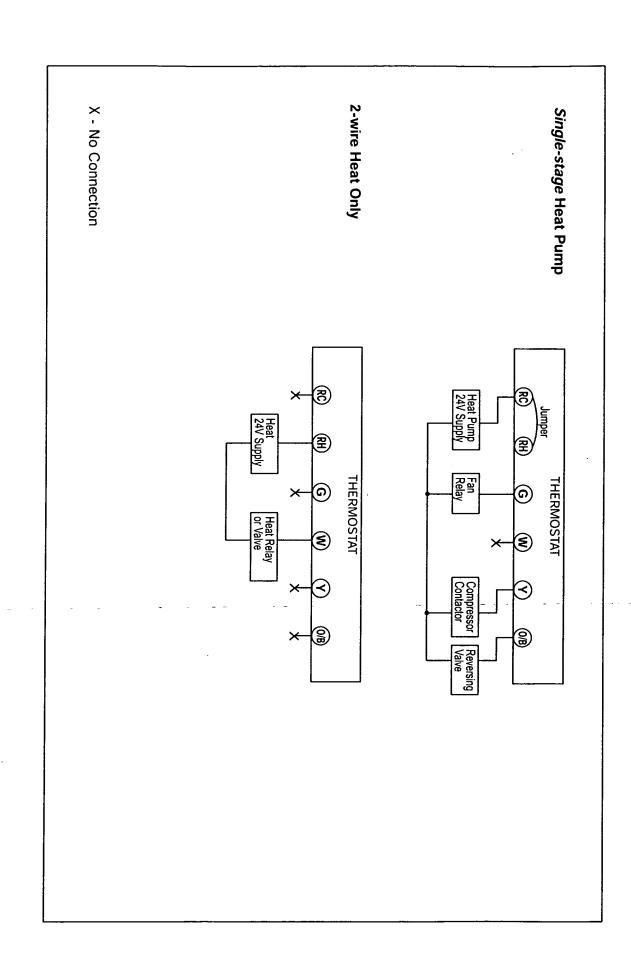
TROUBLESHOOTING	34-35
Problem	Solution
SCRAMBLED OR DOUBLE DISPLAY (numbers over numbers)	1. Remove clear mylar sticker
NO DISPLAY	<ol> <li>Check battery connections and batteries.</li> <li>Press RESET button with a small pin and hold in for two seconds.</li> </ol>
ENTIRE DISPLAY DIMS	1. Replace Batteries
PROGRAM DOES NOT CHANGE AT YOUR DESIRED SETTING	<ol> <li>Check that the time is set properly to "AM" or "PM".</li> <li>Check that the thermostat is not in "HOLD" or "Home Today" modes.</li> <li>Check for the correct day setting.</li> </ol>
AUTO / FAN DOES NOT TURN ON	1. Move HG/HE selector to opposite position
HEATING OR COOLING DOES NOT GO ON OR OFF	<ol> <li>Check that the system selector switch is in the correct position ("HEAT," "COOL" or "AUTO").</li> </ol>
	<ol><li>The thermostat may be in the AUTO mode. Look for "AUTO" on the LCD display. If the Heat and Cool program temperatures are close, then the thermostat requires a larger room temperature change before changing from Heat or Cool.</li></ol>
	<ol> <li>There may be as much as a 4 minute delay before the Heat or Cool system turns On – wait and check. (Compressor protection delay.)</li> <li>Check your circuit breakers and switches to ensure there is power to the</li> </ol>
	system.  5. Replace batteries. 6. Make sure your furnace blower door is closed properly. 7. If your system only uses 4-wires, be sure the jumper wire is installed between the RC and RH terminals.
	8. Check the position of the Famace of near Famp selector switch, Ivolinary C / B

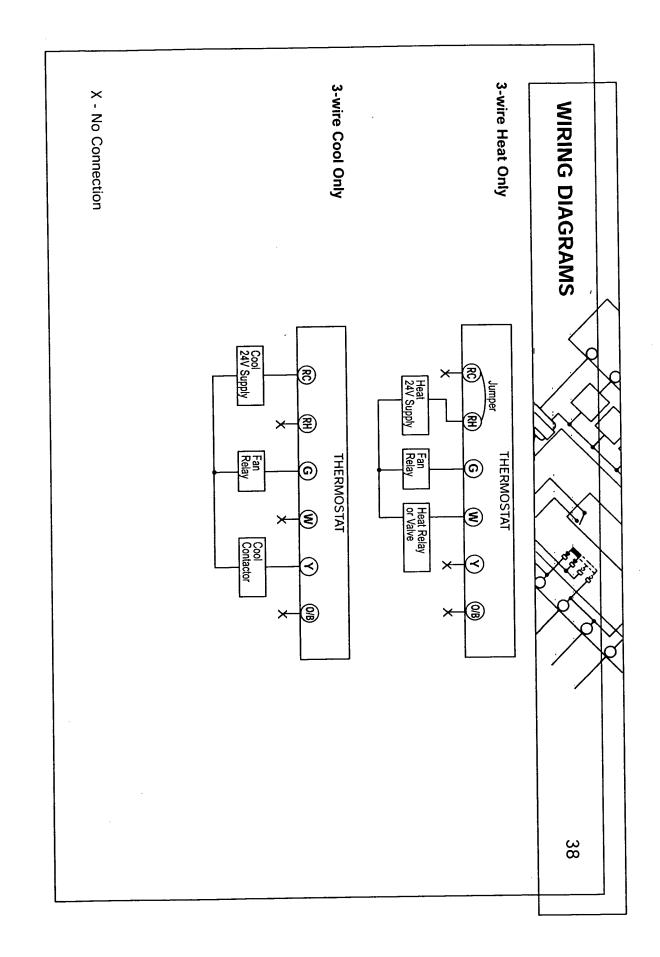
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Problem (cont.)	Solution (cont.)
ERRATIC DISPLAY	<ol> <li>Press the RESET button once with a small pin and hold for two seconds.</li> <li>The thermostat will need to be reprogrammed.</li> </ol>
IF UNIT CONTINUES TO OPERATE IN THE OFF POSITION	1. Replace unit.
THERMOSTAT PERMANENTLY READS "HI," "LO," OR "ERR-" AFTER PRESSING RESET BUTTON	1. Replace unit.
If you experience any other problems, call 901-745-9222 from 8 AM to 5 PM Central Time for technical assistance.	8 AM to 5 PM Central Time for technical assistance.

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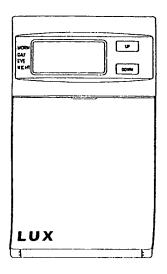


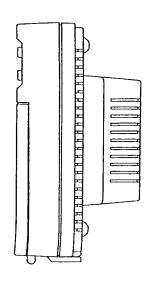
### INSTALLATION INSTRUCTIONS FOR



### ELV<sub>1</sub>

### Programmable Line Voltage Thermostat





### For Use On:

- Heating Only 120/240 Vac Single Pole Applications
- Baseboard, Ceiling Cable and other Radiant Heat

### Not For Use On:

- · Double Pole Applications
- Heating/Cooling or Cooling Only
- · Low Voltage (24Vac) Systems

### **Electrical Rating**

16A at 120/240 Vac 1900W at 120Vac (Non-Inductive) 3800W at 240 Vac (Non-Inductive)

### Temperature Differential

±1°F Factory Preset; Adjustable

### **Batteries**

 Requires 2 AA Batteries not incl.

### **Programming**

- Preprogrammed 4 Periods per day
- 5/2 Programming
- Wcekdays/Weekends can be different
- °F'/ °C Changeable —
- Temporary Temperature Override
- Vacation Hold

### Dimensions

- 4.7" T x 2.7" W x 2.4" D
- 1.4" D from wall surface

### Wall Plate

 4.8" W x 5.0" H Wallplate Included

### INSTALLATION

### WARNING

- This Thermostat is a line voltage (120 / 240 Vac) control. Do not install it unless you are completely familiar with house wiring. If improperly handled, there can be a risk of electric shock hazard which may cause serious injury or death.
- The ELV1 is rated for normal full load current on a dual residential 20A circuit breaker or fuse block. Do not use on circuits protected by higher-rated over-current protection devices. Some sustained fault conditions can cause product failure.
- Do NOT connect to voltage different from the device rating.

### CAUTION

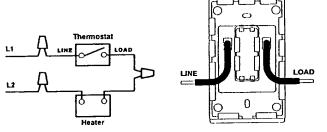
- Disconnect power supply before making wire connections to prevent electrical shock or equipment damage.
- All wiring must comply with applicable codes and ordinances.
- Thermostats are designed to be used with appliances having a limit control.
- Maximum load for this thermostat MUST NOT EXCEED 3800W, otherwise a potential fire hazard exists.

### Location:

Install a vertical switch box for mounting the ELV1 approximately 1.5 m (5 ft.) above the floor on an inside wall where the thermostat will be exposed to average room temperature. The thermostat must be placed away from concealed warm or cold water pipes, air ducts, or drafts from hallways, fireplaces or stairways to sense temperature properly. Do not place the thermostat above the heater.

### WIRING

- Disconnect power while installing. Double check that the thermostat is rated for the voltage and amperage load to be controlled.
- 2. Remove the cover by carefully pressing the button at the bottom of the thermostat and swinging the body up and away.
- 3. When replacing an old line voltage wall thermostat, remove it carefully to avoid damage to the insulation on the wiring. Check the old insulation for cracks, nicks, or fraying and apply certified electrical tape where necessary to achieve adequate insulation, or replace the wires in an approved fashion.
- 4. Attach the wires with solderless wire connectors (provided). Be sure that all wire connectors are tight.



**CAUTION:** Do not short the 120 / 240 Vac wires with the thermostat. This will damage the thermostat and void the warranty.

WARNING: To avoid the risk of fire hazard, all connections to aluminum conductors must be made using approved CO/ALR solderless wire connectors. Do not use the supplied solderless wire connectors.

- Bend the solid conductors, then push them and the wire connectors into the electrical box. Secure the thermostat base to the electrical box with the mounting screws.
- 6. Snap the cover in place.
- 7. Turn the power on.

### **INSTALLING BATTERIES**

The ELV1 requires batteries to operate your furnace and retain its programming in memory and to light the display. Replace the batteries when the LO BAT indicator appears in the display or at least once a year.

NOTE: When replacing batteries, you have approximately 1 minute before the programs are lost.

- 1. Remove the fresh batteries from their package.
- Open the front door of the thermostat and tilt out the battery compartment.
- 3. Remove the used batteries if necessary.
- Install TWO new "AA" size alkaline batteries in the battery compartment.
   Observe the polarity marking shown in the compartment.
- 5. Place the battery compartment back in the thermostat.
- 6. Close the door.

Note: If this is the first time you are installing batteries, the thermostat will display "SUN 12:00 AM". Within 90 seconds, the thermostat will begin to display the room temperature alternately with the time. To correct the display, see SEITING THE TIME AND DAY.

### **OPERATION**

This thermostat is "armchair programmable." You can make any program or setting changes with the thermostat body off or on the wall thermostat base.

The ELV1 alternately displays the current time and the room temperature. It also displays the day of the week and the currently active control program that is controlling the temperature: MORN, DAY, EVE, or NIGHT. The set point temperature will appear in the right side of the display.

### The Built-In Programs

Push in the RESET key. This sets the built-in heating programs. To review the built-in programs, rotate the dial to SET WEEKDAY PROGRAM or SET WEEKEND PROGRAM.

You can use the built-in programs as shown, or change them as you wish. Each day is divided into four periods. Each period has its own starting time and temperature.

	PERIOD	HEAT
WEEKDAYS preprograms	MORN DAY EVE NIGHT	6:00 AM 70° 8:30 AM 60° 3:00 PM 70° 11:00 PM 55°
WEEKENDS preprograms	MORN DAY EVE NIGHT	5:00 AM 70° 6:15 AM 70° 3:00 PM 70° 11:00 PM 65°

The dial must be in the RUN position to close the door.

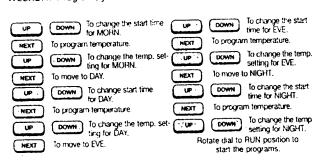
### Programming the ELV1

You can change any of the preset times and/or temperatures to suit your schedules for the weekday and weekend programs. Each day is divided into four periods: Morning, Day, Evening, and Night.

A blank programming chart is provided below for you to record your temperature settings in that chart.



Rotate dial to SET WEEKDAY PROGRAM. To program the WEEK-END, rotate the dial to SET WEEKEND PROGRAM. With dial on set WEEKDAY Program, you will see this display.



### Setting the TIME and DAY

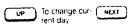


C A U I I O N

The ELVI is protected against normal static electric discharges.

However, in extremely dry weather you should fourth another metal object before the ELVI to avoid potential loss of programs.

Open the drop down door on the front of the thermostat. Rotate the dial to the SET DAY/TIME position. You should see the display pictured above with a flag pointing to a day of the week flashing. When you are finished setting the day and time, rotate the dial to RUN to return to normal operation or to another position to continue programming.



To set current time. The time (e.g. 12.90 AMT) will be flashing



### TEMPERATURE OVERRIDE AND TEMPERATURE HOLD

These features let you change the current Set Temperature without changing the programs stored in your thermostat's memory.

### **Temporary Temperature Override**



- Press UP/DOWN to change the current temperature setting. The OVERRIDE indicator appears on display.
- The Overnde feature will be automatically canceled at the start of the next program period.
- To cancel OVERRIDE prior to next program period press UP/DOWN until original set temperature appears. OVERRIDE indicator will disappear from display.

### **VACATION** Temperature HOLD



- Press HOLD. Adjust temperature as desired with UP/DOWN.
- Temperature setting will not change even after next program period begins.
- To clear, press HOLD again.

### **ADVANCED FEATURES**

( HOLD

### **TEMPERATURE SWING**

A thermostat works by turning your heating on and off whenever the room temperature varies a certain number of degrees from the set-point temperature. This variation is the "swing."

Your system should cycle on about 3 to 6 times per hour. A smaller swing number increases the number of cycles, so room temperature is more constant. A larger swing number decreases the number of cycles, to save energy in most cases.

### **SWING SETTINGS**







Press together

To change

NEXT Press to set.

swing

### CHANGING FROM °F to °C AND A 12HR CLOCK TO A 24HR CLOCK

- Warning: Making these changes will require you to reset the thermostat. Copy any of your customized programs onto the chart below. This will be your reference to reenter the programs afterward.
- Located at the center of the circuit board of your thermostat are two dip switches.
- To change to Celsius, move the top dip switch to the right.
- · To change to a 24HR clock, move the bottom dip switch to the right.
- Press the reset key on the front of the thermostat for the changes to take effect.
- · Reprogram as necessary.

### PROGRAMMING CHART

DAY	PERIOD	TIME	TEMP
MONDAY	MORN		
through	DAY		and the second section is a second section.
FRIDAY	EVE		and the second of the second s
FRIDAI	NIGHT		
SATURDAY	MORN		
1 - 1	DAY		
and	EVE		
SUNDAY	NIGHT		

### **TECHNICAL SERVICE**

If you have problems installing this thermostat, please reread the instructions carefully. Be sure the batteries are good, and installed correctly. Press the RESET button if erratic operation is encountered. If you still have problems, call Technical Service at 1-856-234-8803 between 8:00 a.m. and 4:30 p.m. Eastern Standard Time. Monday through Friday. Please refer to Model ELV1.

### WARRANTY

Limited Warranty: If this unit fails because of defects in materials or workmanship within one year of date of original purchase, LUX will, at its option, repair or replace it. This warranty does not cover damage by accident, misuse, or failure to follow installation instructions. Implied warranties are limited in duration to one year from date of original purchase. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Please return malfunctioning or defective units to the participating retailer from which purchase was made, along with proof of purchase. Please refer to Technical Service Section before returning thermostat.

Purchaser assumes all risks and liability for incidental and consequential damage resulting from installation and use of this unit. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. Applicable in the U.S.A. only.

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